



EX PARTE OR LATE FILED

DOCKET FILE COPY ORIGINAL

Christine O. Gregoire

ATTORNEY GENERAL OF WASHINGTON

Utilities and Transportation Division

1400 S Evergreen Park Drive SW • PO Box 40128 • Olympia WA 98504-0128 • (360) 753-2281

October 28, 1996

EX PARTE

Mr. William F. Caton
Acting Secretary
1919 M Street N.W., Room 222
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

FCC MAIL ROOM

UCT 29 1996

RECEIVED

Re: Ex Parte CC Docket No. 96-45, Federal-State Joint Board on Universal Service

Dear Mr. Caton:

On September 23, 1996 and September 27, 1996 the Washington Utilities and Transportation Commission conducted public hearings in Bellevue and Ellensburg, Washington, respectively, on issues relating universal service. In accordance with Section 1.1206(a)(2) of the Commission's rules, we submit for filing in CC Docket No. 96-45 two copies of the transcripts of those hearings.

Sincerely,

JEFFREY D. GOLTZ

Senior Assistant Attorney General

JDG/dc

Enclosures

cc (w/o Enclosures):

Chairman Reed E. Hundt
Commissioner Susan Ness
Commissioner Rachelle Chong
Commissioner C. Kenneth McClure
Commissioner Julia Johnson
Commissioner Laska Schoenfelder
Ms. Martha Hogerty

No. of Copies rec'd
List ABCDE

021

EX PARTE OR LATE FILED

DOCKET FILE COPY ORIGINAL

1

FCC MAIL ROOM

UCL 29 1996

RECEIVED

BEFORE THE UTILITIES AND TRANSPORTATION COMMISSION

In Re: Petition for Rule Making)	
by WA Independent Telephone	DOCKET NO. UT-950724
Association to Adopt a	VOLUME 1
Definition of Basic	PAGES 1 - 144
Telecommunication Services	

A hearing in the above matter was held at
1:15 p.m. on September 23, 1996, at 11100 Northeast
Sixth Avenue, Meydenbauer Center, Bellevue, Washington
before Chairman SHARON L. NELSON, Commissioner WILLIAM
R. GILLIS and Administrative Law Judge SIMON FFITCH.

Cheryl Macdonald, CSR

Court Reporter

CONTINENTAL-INTERIM COURT REPORTING
SEATTLE, WA (206) 624-DEPS (3377)

I N D E X

1-18 JAN 1964

2001-1-18

CLARK JR

1		
2		
3		
4	SPEAKERS:	PAGE
5	PALAGYI	6
6	BOOKEY	11
7	SCHOLTEN	36
8	DANNER	46
9	JOHNSON	63
10	STANTON	70
11	SIMS	80
12	MITCHELL	89
13	JACOBS	99
14	FOWLER	107
15	BERG	112
16	NOTSUND	116
17	SMALL	122
18	SCHAUDIES	130
19		
20		
21		
22		
23		
24		
25		

1 P R O C E E D I N G S

2 JUDGE FFITCH: Like to apologize, first of
3 all, for the delay in the beginning of the meeting,
4 and also like to welcome you all to this public
5 hearing organized by the Washington Utilities and
6 Transportation Commission to provide an opportunity to
7 discuss how the Federal Telephone Communications Act
8 will affect telecommunications services for schools
9 and libraries.

10 The Federal Telecommunications Act of '96
11 specifically addresses universal service issues for
12 schools and libraries and requires service to be
13 provided at a discount rate. The Federal
14 Communications Commission and a federal/state joint
15 board of which Sharon Nelson, chairman of the
16 Washington UTC, who is seated immediately to my left,
17 is a member, the FCC and the federal/state joint board
18 are considering rules to implement the universal
19 service provisions of the new law and states will have
20 a major role in implementing these new rules.

21 That process is going on right now. As
22 part of its examination of universal service the
23 Washington Utilities and Transportation Commission has
24 scheduled two public meetings -- this is one of them
25 -- to provide an opportunity for members of the

1 education/library community as well as other
2 interested persons to comment on these important
3 issues. The second meeting is being held in
4 Ellensburg this Friday. Before we begin, let me
5 explain the format for today's hearing. First of all,
6 Chairman Nelson will give an introduction. Secondly,
7 we will have a presentation from Lee Palagyi of the
8 Commission staff who is working very closely with the
9 joint board staff on the universal service issues
10 including schools and libraries, and she will utilize
11 the overhead projector which has now been set up.

12 Following the staff presentation we have
13 some scheduled speakers, five scheduled speakers who
14 have been asked to address the Commission on these
15 issues, and following the scheduled speakers we will
16 call on other members of the audience, invite their
17 comment. We'll look at the sign-up sheet from the
18 front table to get those names, and I have those in
19 front of me, right here. I will be reading off the
20 list. As you came in you should have had a chance to
21 indicate whether you would like to speak. After I go
22 through the names from this sign-up sheet if there's
23 anyone else who has comments we can also entertain
24 those.

25 So without further adieu I will introduce

1 the chairman of the Utilities and Transportation
2 Commission, Sharon Nelson.

3 CHAIRMAN NELSON: Thank you, Simon. We
4 welcome everyone on this beautiful afternoon. Pleased
5 to see so many people here. As Judge ffitch
6 indicated, I am one of four state regulators on the
7 federal/state joint board charged with implementing
8 the universal service provisions of the new
9 Telecommunications Act of 1996. The other three state
10 regulators hail from Missouri, South Dakota and
11 Florida, and there is also a consumer advocate on the
12 board who represents consumers in Missouri most of the
13 time and now national consumers on this particular
14 project.

15 With me today is my colleague from the
16 state commission, Commissioner Gillis. We were
17 together last week in Spokane sitting with the deputy
18 administrator of the Rural Utilities Service, a part
19 of the United States Department of Agriculture on
20 these very same issues, so we are very pleased to hear
21 from you today.

22 We are here to specifically hear from you
23 on implementing one part of the new universal service
24 provision of the act, and that is the requirement that
25 discounts for telecommunications services, basic,

1 advanced and special, be given schools and libraries.
2 Very important public access points for very important
3 evolving new technologies and information services.
4 However, if there are others of you here who would
5 like to talk about other traditional notions of
6 universal service, including support mechanisms for
7 high cost areas, for lifeline or link-up programs, we
8 would also be very pleased to hear from you. Thank
9 you.

10 JUDGE FFITCH: Lee, would you like to make
11 your presentation at this time?

12 MS. PALAGYI: Sure. Actually, I don't have
13 any overheads. Simon built me up for nothing. I
14 think I will stand up, though. I thought that I would
15 take just a few minutes for people who maybe are not
16 as familiar with what exactly this process is, why
17 we're talking about universal service, and how we got
18 to this point in the process. I thought I would take
19 a few minutes to just run through the background and
20 hopefully give you a little bit of context so you
21 understand that we're not doing this in a vacuum.

22 As Sharon mentioned, the 1996
23 Telecommunications Act was passed in late January of
24 last year and actually signed by the president in
25 February, and that started a clock ticking. We have

1 nine months, the joint board has nine months to make a
2 recommendation to the FCC on policies regarding
3 universal service, and there's a whole litany of
4 questions that are involved beyond just the schools
5 and libraries question, and so I thought I would take
6 a few minutes and give you a little bit of
7 understanding of what those other issues are, what
8 universal service is and how we got to this concept
9 today.

10 Universal service is a concept that really
11 emerged, although not in law, around the turn of the
12 century, and actually it was coined by Theodore
13 Hale who was using the concept to really talk about
14 why there needed to be monopoly service in the nation.
15 It's evolved past that to become this concept that
16 universal service is a public good. There is a social
17 good in having all citizens have the opportunity to
18 have access to the public switched network, and
19 recognizing that there are cost variables associated
20 with serving various regions of the country, and those
21 cost variables include terrain and climate, density of
22 the population and whatnot, there was an idea that
23 there needs to be affordable universal service for all
24 citizens.

25 Up until the passage of the 1996 act there

1 was not the inclusion in the law of the concept of
2 universal service, so it has arisen for the first time
3 and it's in statute now as well as the concept there
4 should be affordable service. Previously there was
5 only a concept that the rates for services for
6 telecommunications services should be just and
7 reasonable. So with the passage of the '96 act we now
8 have in statute that the FCC upon the recommendation
9 of a joint board should define what these core basic
10 services which comprise universal service should be.
11 That should be made available to all citizens at just,
12 reasonable and now affordable rates.

13 Included in this -- in the new principles
14 that were in the act is the concept that rural and
15 urban consumers should have access to the same similar
16 services at, quote-unquote, reasonably comparable
17 rates. So, we have to now devise a way in which we
18 insure that the rates afforded to consumers in rural
19 areas are reasonably comparable to those afforded to
20 citizens in the urban area. And this is another
21 recommendation that the joint board must make.

22 Also included is a concept of the discount
23 for the schools and libraries. The provision 254H, to
24 be specific, mentions that schools and libraries --
25 let me back up. All telecommunications carriers upon

1 a bona fide request from schools and libraries shall
2 make available telecommunications services at a
3 discounted rate and that discount is what the joint
4 board is deliberating upon right now. And then the
5 amount of that discount will then be reimbursed to a
6 carrier. I think it's important to emphasize that
7 this discount is going to be reimbursed to the carrier
8 from some entity, and that's another question that we
9 have to grapple with, is how are we going to fund
10 these discounts on a nationwide basis. And currently
11 there are several mechanisms in place by which
12 universal service is funded, and in particular those
13 -- that fund in one example compensates rural carriers
14 for the extremely high cost of providing service in
15 some rural areas, and so the joint board has to come
16 up with recommendations about how to equitably create
17 this fund, have carriers contribute to the fund, and
18 how to distribute money from that fund.

19 Finally, there is also a provision on rural
20 health care providers. This also gets to the concept
21 that providers of health care who provide service in
22 rural areas should have rates for similar services at
23 reasonably comparable rates to those health care
24 providers in urban areas, and so we are also in the
25 process of trying to come up with a process by which

1 those health care providers can get rates, and also
2 again come up with a mechanism to compensate those
3 carriers for the amount of the quote-unquote discount
4 that they will be receiving.

5 So the joint board is -- the point at which
6 we are right now is that we've taken -- on March 8
7 there was an initial MPRN and it issued, which
8 basically outlined some ideas for how to tackle these
9 many problems and then subsequently we requested
10 comment and reply comments from the public. Those
11 comments have been received and are filed in the
12 federal document at the FCC as well as at the state
13 commission. Subsequently we also put out a general
14 notice, which many of you may have seen, which is a
15 list of 72 questions asking for input on various
16 topics ranging from the schools and libraries issue to
17 the definition and whatnot, and we received that
18 comment around the 2nd of August, and now we have a
19 recommendation due that will be voted by the joint
20 board on November 7th. The joint board has also held
21 several public hearings in Washington D. C. where they
22 had panelists come in and speak on a variety of the
23 issues trying to provide further input as to how these
24 many issues before the joint board should be resolved.

25 So at this point we're coming to the final

1 stages of the recommendation. The FCC has until May
2 of next year, May 8th of next year, to issue its final
3 rules upon recommendation of the joint board.

4 JUDGE FFITCH: Thank you, Lee. At this
5 point -- and I apologize for falsely accusing you of
6 intent to use an overhead projector. Apparently one
7 of the coming speakers will be using that, and at this
8 time I would like to begin to go through our list of
9 scheduled speakers and our first speaker is Mr. Mike
10 Bookey, and ask you to come up to the microphone at
11 the front so that everyone can hear it.

12 Mr. Bookey, could you please, for the
13 benefit of the panel here and also for the attendees,
14 give us a brief introduction of your background for
15 those who aren't aware.

16 MR. BOOKEY: Sure. My name is Mike Bookey.
17 I'm president of Digital Network Architects. As a
18 parent a number of years ago I got involved with my
19 own school district. My expertise is in building
20 network systems. In the past I've looked at building
21 networks for countries like South Korea, so my
22 expertise lies in building large infrastructures.
23 Since then the Issaquah School District, which is
24 where my work was done, has been replicated throughout
25 state of Washington. I'm working with the districts

1 in Oregon, given keynotes to 14 states on the subject,
2 probably 200 speeches and talked to about 2,000 school
3 districts.

4 So what I wanted to do today was not take a
5 lot of time but from my perspective rather than to
6 specifically address universal service, and I am not a
7 lawyer and it gets way too deep, what I wanted to do
8 was to share what I see going on in K through 12
9 education such that understanding what K through 12
10 faces, changes in its infrastructure. Then you can
11 look at universal service and best know how to apply
12 universal service to actually help the school
13 district. So I have a few slides because a picture is
14 worth a thousand words and I thought I would save a
15 thousand words.

16 Before I talk about the specific picture
17 that's up here, let me tell you my perspective. When
18 I walked into the schools as somebody who has run
19 MIS departments for large organizations, what I saw in
20 schools were that they were information organizations.
21 Schools do not deal in any other commodity than
22 information. Textbooks, there's lectures, there's
23 overhead projectors. Students write, students read,
24 and so what we really have is an information
25 organization not undifferent than business. The other

1 is that students are information workers, so I will
2 use Issaquah as an example but you can apply it to
3 just about any school district.

4 Issaquah had about 1,000 staff and 10,000
5 students when I started. Most people consider the
6 staff the workers and so we only consider electronics
7 for them, but when you consider students as
8 information workers Issaquah suddenly had 11,000
9 information workers in 20 locations, which, if you
10 compared to business in the state, made us about the
11 third largest employer of business workers in the
12 state. At the time we were larger than Microsoft.
13 Issaquah is a medium to large school district.
14 Seattle schools is 45,000. Edmonds, I think, is close
15 to 30,000. Northshore 20, 25,000.

16 So in our communities school districts are
17 the largest public or private entity in any of our
18 communities. I don't think you can find one that
19 isn't. If you look at Seattle schools, 45,000
20 students, about 5,000 staff, 50,000 information
21 workers in 120 locations in the city boundaries.
22 Boeing does not have that many workers in the city
23 boundaries. So these are very, very large
24 organizations and if we're going to build
25 infrastructure then it is going to be complicated or

1 more complicated than all businesses in the United
2 States. New York City schools as an example. One
3 million students, 1,000 schools. How many businesses
4 in the United States have one million workers in 1,000
5 locations? Not very, very many.

6 The other thing that's interesting about
7 schools is that school districts, which is a school
8 and there's a school district which is the natural
9 organization, the schools themselves are very densely
10 located geographically. So we have 20 locations in
11 about 120 square miles, so the distances and the
12 geography involved, particularly when it comes to
13 communications, are not like business. Buying a T1 in
14 a school, Northshore -- excuse me, North Thurston
15 County School District has 19 schools all out of the
16 same central office serving area. There is no mileage
17 in their mind.

18 The other is that the big issues in schools
19 are knowledge, basically the lack of knowledge of
20 technology and support. Where do they get the people
21 to run these infrastructures? And specifically in
22 Issaquah's case -- and I am going to go through and
23 just quickly show you the case study and pretty much
24 every district goes through this same journey. In
25 Issaquah they spend \$168,000 a year on communications

1 budget. They have an operating budget of over \$60
2 million, so as a percentage communication works out to
3 two-tenths of a percent of the total operating budget.
4 Now, in a bank or in a business you would expect to
5 see communications costs anywhere from 10 to 20
6 percent, so schools as a percentage do not spend a lot
7 on communications, primarily because if you're buying
8 a
9 T1 it's all local loop versus from Seattle to Florida
10 there's a big difference in cost.

11 So I have first here a slide and it's
12 conceptual, it's not precise, but when I got involved
13 with Issaquah -- and subsequently I've done many
14 districts, same pattern, so this pattern you can look
15 at is a general pattern. There might be some
16 deviations off of it but essentially school districts,
17 in Issaquah's case, as the example, had nothing but
18 business lines. So you have just straight analog
19 business lines. Data traffic traveled over the analog
20 business lines using modems. So as an example, what a
21 district -- what a school would do is somebody in a
22 school office would dial up a central location,
23 connect to a multiplexer in the state of Washington
24 and get on the 56 kilobit up to WSIPC, which is the
25 data processing cooperative for K through 12, so

1 essentially you have an analog phone.

2 Now, the next picture, what you see, this
3 is an analysis of what they had for service. When we
4 sat down with Issaquah they did not know what they
5 were paying for in their communication bill. This is
6 pretty typical. The communications bill was being
7 paid by the secretary of new construction, and when I
8 asked her what it was or how she decided she said,
9 well, I just look at this month's bill and if it's
10 close to last month's bill I pay it. We did an
11 inventory and found out that they were paying for
12 lines that didn't exist. Basically nobody subtracted
13 that as an expense.

14 This is just this little spreadsheet of the
15 number of phone lines that we found in the school
16 versus phones, and typically in elementary, and this
17 is true pretty much across the United States, an
18 elementary will have two to four telephone lines,
19 middle school four to six, and a high school eight to
20 12. In our case we had some schools that had three
21 telephone lines and 52 handsets, so the odds of
22 getting dial tone when you picked up the handset were
23 slim and none. It was like winning the lottery to get
24 dial tone. They had a total of 252 analog lines.
25 That works out to roughly \$9,000 a month is what they

1 were spending.

2 We did interviews with the staff and
3 basically parents were having to drive down to the
4 elementary schools because they were busied out with
5 only three lines one of which was being used for data,
6 so they would have to grab the kids drive down to the
7 school. In an elementary you have 350 students, about
8 50 teachers, 40 to 50, and you probably would have six
9 or 700 adults, so you have a community of over a
10 thousand people involved with an elementary school and
11 you have three telephone lines servicing.

12 So what we did at this point we do at other
13 school districts. I mean, first is we need more
14 telephone lines because it was a liability issue in
15 the sense that if you couldn't get dial tone and there
16 was a 911 call and you couldn't get out there was a
17 liability to the district, so we used that plus we
18 found out that people were spending 35 percent of
19 their time unsuccessfully communicating, which meant
20 they called, they would get busied out, they would get
21 an emergency, it would be written down and not given
22 to the person. There was a struggle with
23 communicating, which was primarily an oral type of
24 communications because there just wasn't any
25 electronic communication.

1 So we looked and said, okay, if we have six
2 phone lines and we need to double -- this is
3 arbitrary. We said, well, if we add six more we're
4 going to have, in this case, from \$9,000, \$18,000
5 cost. The other choice was to put in a digital
6 facility, in this case T1 or DS1, and what happened
7 here is you will see when we go to the T1, which is
8 equivalent of 24 voice channels, we took the 12 that
9 we needed and we bonused out or jackpotted, as we
10 would say, half of the T1s that we would use for the
11 data channel to the routers, and I will show you what
12 that looks like next. So for less money than we were
13 going to have to pay for analog service we were able
14 to buy digital service, provide the phone service we
15 needed and provide data at the margin essentially free
16 to the district. They didn't have to pay it. They
17 were just improving their phone system.

18 So, for a phone system we said, hey, it's
19 an information company just like a bank. We build a
20 private network just like a corporation would because
21 it is a corporation and we put a large PBX at the
22 administration building and a large voice mail system,
23 Oktel, to be specific, the same one that U S WEST puts
24 in its office. Put PBXs in each school, delivered 12,
25 18 and 22 voice channels and then interface and put

1 handsets in every classroom, and essentially teachers
2 have voice mail that they could service out of the
3 central voice mail system, just what you would find in
4 a corporation.

5 This is what districts do next. They have
6 to move essentially from analog to digital and get in
7 on the digital hierarchy. We all have to move to
8 digital communications. Because schools are located
9 in residential neighborhoods they only have copper.
10 There's hardly any -- when I started this eight years
11 ago there was not a single strand of fiber to a single
12 school district or school in the state of Washington.
13 So they're not in the metropolitan core where fiber is
14 running by them provided by CAPs.

15 So what we did is we essentially built
16 T1s, and you see it's a star network, the central
17 office, the patterned circles of the central offices
18 of the phone company, in this case U S WEST. So we
19 have a Renton CO to the right, we have Issaquah CO to
20 the left, and at the bottom we have the Bellevue CO,
21 and that's how our schools were served. When we
22 brought in T1s from the Renton CO and want to bring
23 them over to Issaquah to deliver them to the admin
24 centers, which was essentially our private CO, it was
25 cheaper to buy a DS3 and map those T1s onto the DS3

1 using DACS which is a service that telco would
2 provide. We got the equivalent of -- essentially a
3 DS3 is 28 T1s, so it was cheaper to buy a DS3 with 28
4 T1s than to buy six individual T1s.

5 JUDGE FFITCH: Excuse me, Mr. Bookey, you
6 mentioned DACS.

7 MR. BOOKEY: D A C S, digital access and
8 cross-connect system.

9 JUDGE FFITCH: Just a general reminder for
10 you and the other speakers that as far as acronyms and
11 so on, be helpful for the court reporter and others as
12 well who may not be familiar with all the acronyms to
13 spell them out.

14 MR. BOOKEY: As you look to universal
15 service and subsidizing service this is a service that
16 we purchased from the telco. This is a service that
17 should be covered by universal service. I mean,
18 that's one of the issues here. The others, we
19 delivered a DS3 into the administration building and
20 took all the T1s and essentially used a digital access
21 cross-connect system to get all those on to that DS3
22 going to the administration building.

23 And essentially that's the pattern. Now
24 you will notice there's some schools that are
25 clustered. In one case we found that the school was

1 three blocks, an elementary was three blocks, from one
2 of our high schools so we filed and we became a
3 communications carrier and leased space on the
4 telephone pole and strung our own wire. In other
5 cases where schools have contiguous property, which is
6 typical of the rural areas, we just dug a trench and
7 put in our own wire rather than go through the telco.
8 That worked out beautifully for us.

9 So, I've taken care of the wide area.
10 Given I've taken care of the voice system, this is the
11 way schools are building their data systems, and what
12 you see is a conceptual drawing of a school LAN. Now,
13 basically we're building LANs in our schools that
14 handle both administrative and instructional traffic.
15 We don't distinguish between the two, we simply use
16 security that every business uses to guard what we
17 want to guard. In the schools in Washington and most
18 of the schools in the United States are putting in ten
19 base T, and in a school what you would have is a fiber
20 backbone, which we have main distribution facility, we
21 call it an MDF for the school. Telco or cable will
22 come into that room, cabling a structure (inaudible)
23 goes out and essentially build fiber into backbone and
24 then a twisted category pair 5 out to the classrooms.
25 Typical classrooms are getting eight to ten base

1 (inaudible) LAN network connections and two phone
2 connections. Offices are getting about one and a half
3 LAN connections and one telephone connection. And
4 that's the pattern that's being put into schools.
5 Servers are generally put at one location.

6 And then if you will notice there's a green
7 thing called a router in the drawing. That's where
8 traffic leaves that school and goes out into a larger
9 pattern. So in this case, just taking that previous
10 drawing and collapsed or moved away from it, now you
11 see all the schools and you see the data network
12 overlaid, which is really running on that T1 or DS1
13 DS3 network. Essentially that forms an enterprise
14 network like Microsoft might have or anybody else.
15 It's totally private and you see us head off to the
16 state highway. I will have one more slide that will
17 bear on what's happening in the state of Washington.
18 So we have E-mail systems. We run everything you
19 would find at Microsoft, same technology, identical.
20 And I will close with some facts and figures on this.

21 Now, the next stage, this is a conceptual
22 map of the state of Washington, K through 12.
23 Actually you could call it the new K-20 network that
24 the legislature is funding. There's been a network
25 there and the state government appropriated \$42

1 million to beef it up. And each one of those dots --
2 I didn't have the patience to put all 300 school
3 district dots, but each one of those dots is a
4 district and if you went to that district you would
5 see a pattern like Issaquah. If you went farther you
6 would see a pattern in a school like Issaquah. Over
7 -- essentially what we've done here is we've built a
8 private backbone Internet in the state of Washington
9 that all the universities K through 12 are going to
10 belong to.

11 Now, one of the issues that has to do in
12 this case with subsidizing is the state will pay for
13 that backbone. School districts will be able to use
14 that, as I understand it, free. The big issue is if
15 you see those thick lines and imagine those are data
16 freeways, because that's really what they are, looks
17 like a freeway map, because we go the same places cars
18 go, you will notice that Pullman has a long ways to go
19 to get to the nearest access ramp to that freeway,
20 Pullman being over in the far lower right. The
21 question is, does Pullman have to pay for that access
22 line all the way to that on-ramp, if you want to use
23 that, and is it fair for them to pay that mileage
24 difference when Seattle schools is like a mile from
25 that backbone.

1 So one of the issues the state government
2 is wrestling with is how far does the state pay, and I
3 think what we'll find is the state will pay all the
4 way out to a nodal point in the district and then the
5 district is responsible for building its enterprise
6 network to distribute traffic within the district. I
7 put this up -- the real issues in schools, and I
8 apologize because it can't be read from the back of
9 the room, but the real issue in schools is not the
10 capital dollars because in actuality they have them.
11 They're not that much.

12 Issaquah's case we built a first network in
13 all the schools for \$3 million and we remodeled one of
14 the high schools for \$24 million, so as a parent,
15 somebody who wants to change some things I got a lot
16 more bang for my buck in the \$3 million than the \$24
17 million, essentially just paint the color of the box.
18 The issue has to do with where do the bodies come to
19 support this kind of (inaudible). In a company of
20 11,000 information workers and six or 7,000 computers,
21 six or 7,000 mail users, you might expect to find an
22 MIS group or information technology group of several
23 hundred people, and if that's what Microsoft has to
24 have to run their systems and that's what CISCO
25 routers has to have to run their systems and they